

**Audit of USAID's Assessment of  
the Year 2000 Problem**

**Audit Report No. A-000-98-006-P  
September 21, 1998**

**IG/A/ITSA**



U.S. AGENCY FOR  
INTERNATIONAL  
DEVELOPMENT

September 21, 1998

**MEMORANDUM FOR AA/M, Terrence J. Brown**

FROM: AIG/A, Everette B. Orr

A handwritten signature in black ink, appearing to read "Everette B. Orr". The signature is written in a cursive, slightly slanted style.

SUBJECT: Audit of USAID's Assessment of the Year 2000 Problem (Audit Report No. A-000-98-006-P)

This report shows that after a slow start, the U.S. Agency for International Development (USAID) has significantly increased its focus on assessing and correcting potential Year 2000 problems. USAID has addressed the General Accounting Office (GAO) suggested practices for the assessment phase, but additional work is needed to complete some key processes. By not fully completing the key GAO suggested practices, USAID increases the risk that it will encounter disruptions at the turn of the century. Due to the scope and complexity of needed renovations and the limited time remaining to correct problems, USAID faces a high risk that business operations will be disrupted at the start of the new millennium. The report concludes that focused management attention at the most senior levels of the agency is critical to overcome organizational inertia that could result in disruptions to USAID operations. This report contains two recommendations (see pages 7 and 10).

In the September 15, 1998 response to our draft report, the Assistant Administrator for Management concurred with the recommendations. We have attached, as Appendix II, the complete response to our draft report.

Thank you for the cooperation and assistance extended to our auditors during this assignment.

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## Background

Government, private industry, and the public have come to recognize that the beginning of the Year 2000 could be accompanied by major disruptions in business operations unless computer systems are modified to be able to handle Year 2000 dates. Traditionally, computers have used two digits to represent the year, such as "97" representing 1997. Using this two-digit format, however, makes the Year 2000 indistinguishable from 1900, 2001 from 1901, and so on. As a result of this ambiguity, computer systems that use dates to perform calculations, comparisons, or sorting may generate incorrect results when working with years after 1999. In many cases, these date ambiguities may cause systems to fail altogether.

In February 1997, GAO issued its exposure draft "Year 2000 Computing Crisis: An Assessment Guide" (GAO assessment guide). The guide, which incorporates practices recommended by leading information technology organizations, describes five key phases that agencies should follow to successfully address Year 2000 problems. A description of the five phases is contained in Appendix IV. In July 1997, we reported that USAID had not fully implemented GAO's suggested practices for the awareness and assessment phases.<sup>1</sup>

Specifically, USAID:

- # had not met the government-wide schedule to complete the assessment phase,
- # over-relied on a replacement system--called the New Management System (NMS)--to resolve the Year 2000 problems, and
- # excluded some vulnerable systems from the Year 2000 assessment.

USAID agreed with recommendations to:

- # attach a higher priority to the Year 2000 program,
- # prepare contingency plans, and
- # complete the assessment of vulnerable systems.

Although USAID has strengthened its Year 2000 program, the Office of Management and Budget (OMB) characterizes USAID as an agency that has not shown sufficient evidence of adequate progress.

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<sup>1</sup> Audit of USAID's Efforts to Resolve the Year 2000 Problem, (Audit Report No. A-000-97-005-P, July 11, 1997).

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## Audit Objective

OMB has emphasized the importance of obtaining independent assessments of agency progress implementing Year 2000 corrections. This audit was designed to answer the following objective:

# **Has USAID implemented the General Accounting Office's suggested practices for the Year 2000 assessment phase?**

We focused on USAID actions to complete the 17 key processes associated with GAO's assessment phase. A full description of the scope and methodology is contained in Appendix I. A list of the 17 key processes for the assessment phase is shown in Appendix III.

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## Summary

USAID has significantly strengthened its Year 2000 program by completing actions to define Year 2000 compliance, focus on core business areas and processes, and assess the severity and impact of Year 2000-induced failures, however, USAID must overcome major challenges if it is to avoid operational disruptions at the turn of the century. Although USAID reported to OMB that it completed the assessment phase in November 1997, as of July 21, 1998, USAID had yet to fully complete some important assessment phase processes. In particular, three areas need additional attention to minimize the risk of operational disruptions.

First, USAID has not adequately identified, analyzed, and prioritized systems maintained by bureaus and missions or the systems provided to host countries with development assistance funds. These systems need to be better understood to ensure that USAID operations will not be disrupted and that USAID assistance objectives will not be affected. The Year 2000 project team has not fully assessed mission, bureau, or program-funded systems because the team lacks the authority to require other organizations to address Year 2000 problems and may lack the resources to correct the problems.

Second, USAID lacks detailed schedules and resource estimates to repair mission-critical corporate systems. Without these estimates, senior managers cannot have confidence that USAID will be able to correct Year 2000 problems and avoid disruption. In fact, current schedules indicate that USAID will not meet government-wide target dates to implement compliant systems. To a large extent, this problem is due to a lack of USAID project management expertise. USAID, however, recently hired a contractor to help correct Year 2000 problems, and this contractor has begun developing resource and schedule estimates.

Third, USAID has not yet prepared contingency plans to ensure the continuity of business operations. Given the high risk that USAID will not be able to correct system problems in time to avoid disruptions, contingency plans are essential.

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## Audit Findings

### **Prioritize Efforts and Clarify Authority**

USAID has completed action to define Year 2000 compliance, focus on core business areas and processes, and assess the severity and impact of Year 2000-induced failures. However, USAID has not adequately identified, analyzed, and prioritized mission, bureau, and program-funded systems. This deficiency exists because the Year 2000 team lacks the authority to require bureaus and missions to participate and may lack the resources to address their Year 2000 problems. Therefore, USAID does not have a complete inventory of all systems and failures of these systems could disrupt operations.

USAID has categorized its portfolio of systems as: (1) corporate systems, including NMS and legacy systems, (2) mission systems, (3) bureau systems, (4) program-funded systems, (5) non-information technology/infrastructure systems, and (6) informal spreadsheets. USAID has done an effective job prioritizing corporate systems. These include mission-critical systems maintained by the Information Resources Management (IRM) Division. Because these systems affect core business processes USAID-wide, they represent the most critical systems that need to be addressed. They support core business functions such as accounting and financial management, personnel and payroll, procurement activities, and loan management activities. The assessment of NMS and legacy systems has been completed, and USAID understands the system vulnerabilities and the impact of these systems on the business process.<sup>2</sup> Although not complete, USAID has also made adequate progress identifying non-information technology and infrastructure systems, including desktop personal computer systems.

However, USAID has not completed an assessment of mission, bureau, program-funded, or informal spreadsheet systems. In an attempt to obtain information about mission systems, the Year 2000 project team sent a questionnaire to the missions. The questionnaire asked the missions to identify their systems and classify the systems as critical, important, or marginal. However, only 48 of more than 80 missions responded to the questionnaire. Further, according to Year 2000 officials, several missions did not adequately answer the questions. Also, IRM personnel stated that developing an inventory for informal spreadsheets is a low priority and the process would be costly.

As a result, USAID does not have a complete assessment of other potentially significant systems that are operated by bureaus and missions, including spreadsheets. For example, locally maintained payroll systems are used to pay foreign nationals who are employed at overseas

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<sup>2</sup> USAID has identified seven top priority corporate mission-critical systems. The systems are (1) Financial Accounting and Control System (FACS); (2) Mission Accounting and Control System (MACS); (3) New American Payroll System (NAPS); (4) American Electronic Time and Attendance (AETA); (5) Revised Automated Manpower and Personnel System (RAMPS); (6) Loan Accounting Information Systems (LAIS); and (7) the New Management Systems (NMS).

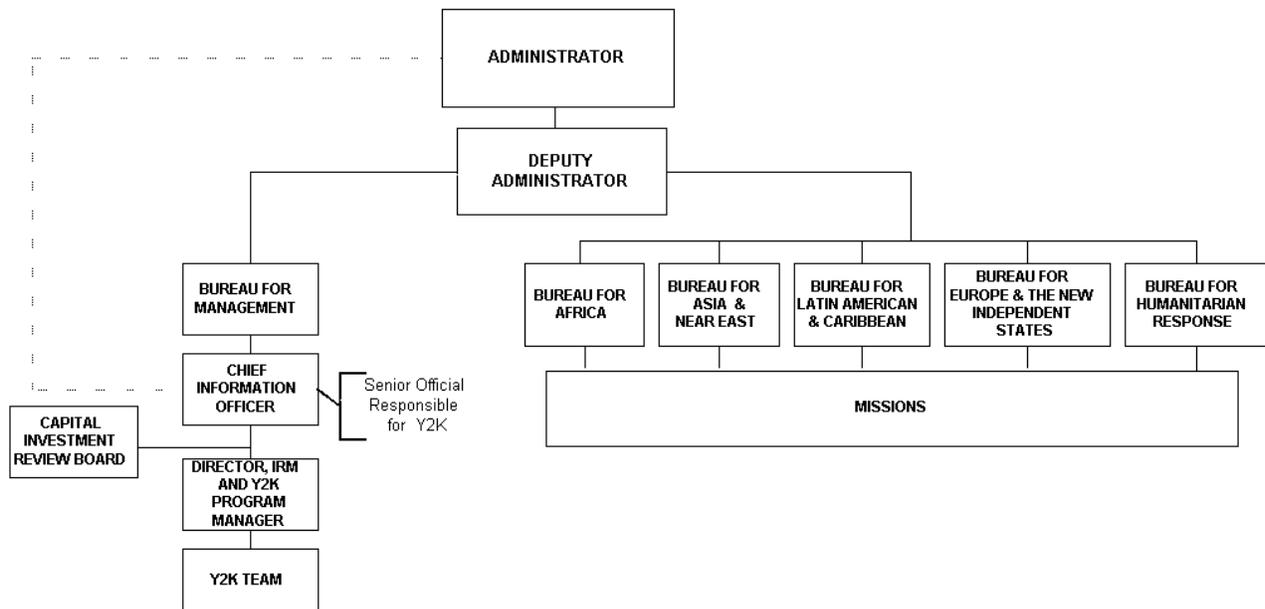
missions, and at least one bureau uses a locally developed system to report program status information to Congress. Failure of these systems could disrupt operations. Thus, if these systems are not assessed and made compliant, mission or bureau business operations could be disrupted.

In addition, USAID's assistance to developing countries includes information systems which are vulnerable to Year 2000 problems. However, until very recently, USAID has not addressed either the vulnerability of these systems to Year 2000 problems or the impact system failures would have on recipient countries or USAID development assistance objectives. If program-funded information technology (IT) systems fail to operate in the Year 2000, some host countries could experience significant problems. Although USAID has not developed a comprehensive inventory of program-funded systems, the Fiscal Year 1999 Congressional Presentation included the following programs that may have such systems: a computerized tax information system to support fiscal reform in the Ukraine, a stock market trading system in Russia, and extensive communication network improvements in Egypt.

Similarly, although USAID has established a Year 2000 team to address mission-critical corporate systems, the bureaus and missions are not fully engaged in USAID's Year 2000 project. In April and May 1998, the IRM division issued two general notices requesting that each USAID's mission and bureau appoint Year 2000 program and operating expense coordinators to help ensure that problems affecting bureaus and missions are addressed. However, as of July 6, 1998, only 29 missions/bureaus have provided names of program-funded coordinators and only 25 missions/bureaus have named operating expense funded coordinators. There are approximately 93 missions/bureaus. Due to the time constraints to meet the Year 2000 deadline, and the potential for disruption to USAID operations, bureaus and missions need to be actively engaged in identifying and resolving potential Year 2000 problems.

The reason missions and bureaus are not more engaged in the project is that the Year 2000 team does not have adequate authority to require missions and bureaus to address Year 2000 problems. The Year 2000 team reports through the Year 2000 Program Manager to the Chief Information Officer (CIO). The CIO appears to be the senior official responsible for the Year 2000 effort and is organizationally located in the Management Bureau. However, the Automated Directive System (ADS) 103 - Delegations of Authority has not been revised to reflect the authorities and responsibilities identified by the Clinger Cohen Act that created the CIO. The ADS only describes authority for the Assistant Administrator for Management as the Designated Senior Official (DSO), therefore, it is unclear whether the CIO has been delegated the authority necessary to carry out the Year 2000 program. The following organization chart describes the current structure for USAID's Year 2000 program.

## USAID/YEAR 2000 ORGANIZATIONAL CHART



According to the CIO, although he does not have the authority to require missions and bureaus to address Year 2000 problems, he does have the ability to persuade bureau and mission managers to recognize the importance of addressing Year 2000 problems, especially by pointing out the consequences if the problems are not addressed. In this regard, the CIO noted that he and the Year 2000 Program Manager have been meeting with bureaus to call attention to the need to address the problem.

In addition to a lack of authority, limited resources also appear to have led the team to limit its role in addressing bureau and mission problems. A Year 2000 project official pointed out that even if the CIO had the authority to address mission and bureau problems, the Year 2000 team does not have the resources to do so effectively. For the operating expense funded systems, the Year 2000 team originally planned to increase bureau and mission awareness, provide guidance, verify systems inventories, and monitor progress. However, limited resources, including a 13 percent reduction in IRM staff, have prevented the team from verifying inventories and monitoring progress. For program-funded systems, the team's efforts are limited to increasing bureau and mission awareness that program-funded systems also need to be considered. The CIO agreed that limited resources also contributed to the decision to limit the Year 2000 team's role in addressing mission and bureau problems.

The President, in Executive Order 13073, Year 2000 Conversion, made the head of each executive agency responsible for assuring that (1) efforts to address the Year 2000 problem receive the highest priority attention in the agency, and (2) no critical federal program experiences disruption because of the Year 2000 problem. Because stronger action is needed to ensure success, we make the following recommendation:

**Recommendation 1: We recommend that the Administrator clarify the assignment of responsibility to implement an effective Year 2000 compliance program and provide the responsible official with adequate authority and resources to complete the program.**

### **Plans, Resources, and Schedules**

Although USAID has developed a program plan to repair or replace corporate systems, including mission-critical systems, the plan's scheduled completion dates are later than government-wide target dates. USAID also has not prepared detailed estimates of the tasks, time frames, and resources needed to repair or replace mission-critical or other corporate systems. Without reliable cost and schedule estimates, senior management cannot have confidence that the effort will be completed in time to avoid operational disruptions. USAID officials attribute the lack of detailed resource and schedule estimates to limited project management capabilities. Recognizing that it lacks these project management skills, USAID recently hired a contractor to manage its information system acquisition, operations, and maintenance activities, including correcting Year 2000 problems. The contractor has begun preparing detailed schedules.

Although USAID has prepared a high level schedule to complete the renovation, validation, and implementation phases for mission-critical systems, the scheduled dates of completion are later than called for by OMB, and appear to allow limited time to complete some activities. A comparison of the GAO/OMB and USAID schedules is shown in Table I.

**TABLE I**

**A Comparison of the GAO/OMB and USAID Schedules**

<b>Phases</b>	<b>GAO/OMB Completion Date Schedule</b>	<b>USAID Completion Date Schedule as of May 1998<sup>3</sup></b>
1. Awareness	December 1996	Continuous Process
2. Assessment	August 1997	November 1997 <sup>4</sup>
3. Renovation	September 1998	January 1999--legacy systems June 1999--NMS
4. Validation	January 1999	February 1999--legacy systems August 1999--NMS
5. Implementation	March 1999	March 1999--legacy systems September 1999--NMS

In particular, USAID's schedule allows little time for testing and implementation. NMS testing is scheduled between June and August 1999. NMS implementation is scheduled to occur between August and September 1999. According to GAO, agencies may need over a year to adequately test and validate systems. Also, GAO estimates that testing may consume over half of the Year 2000 resources and budget.

Further, we reviewed USAID's detailed schedules and found that they are incomplete and do not provide an adequate basis to allow managers to monitor progress or to become aware of problems in time to take timely action. According to USAID documents, of the six legacy mission-critical corporate systems, one has been renovated<sup>5</sup>, three are slated for repair, one is scheduled to be retired, and the decision on one has been deferred because USAID is considering outsourcing the function. However, USAID has not prepared plans describing the tasks, resources, and times

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<sup>3</sup> This information applies only to USAID's mission-critical systems. The Year 2000 requirements of not-mission-critical information systems are being addressed by the management of specific operating units on a case-by-case basis.

<sup>4</sup> USAID reported to OMB that it had completed the assessment phase in November 1997, but as of July 21, 1998, USAID had not fully completed assessment phase key processes.

<sup>5</sup> We have not analyzed the extent to which USAID has verified that the system is compliant.

required to implement fixes for each system. Without reliable plans that identify the tasks, resources and times required, managers cannot have confidence that mission-critical systems will be repaired or replaced in time to prevent disruptions. When combined with the fact that (1) scheduled completion dates are later than deadlines set by OMB, and (2) the time available to complete key phases appears compressed, we believe significant risks exist that USAID will encounter system failures at the turn of the century.

USAID has not yet developed detailed plans to complete the Year 2000 project because it has limited project management capabilities. USAID has recognized project management deficiencies as one component of information resources management deficiencies, which it identified in its fiscal year 1997 Federal Managers' Financial Integrity Act report. USAID plans to take a number of actions to correct this deficiency. In particular, USAID plans to strengthen its ability to manage the acquisition of software products. This represents a major shift in emphasis away from directly managing the development of software and toward managing a prime contractor that would be responsible for developing the software. In May 1998, USAID awarded a contract to acquire, operate, and maintain USAID's information systems to Computer Sciences Corporation (CSC). USAID plans to use this contractor to complete the Year 2000 project.

Starting in June 1998, the contractor was assigned the responsibility to prepare a plan to correct Year 2000 problems associated with NMS and legacy systems. Although the contractor has just begun work, it has drafted a project plan and has begun preparing detailed plans and schedules. This should allow USAID management to monitor progress and identify problems early enough to take timely action. Since USAID recently issued the contract to CSC and has directed CSC to prepare a plan to complete Year 2000 renovations, we have not included any recommendations related to planning.

### **Develop Contingency Plans**

Contingency plans are important to ensure that critical business functions will continue to operate in the event information systems fail due to unresolved Year 2000 problems. Because USAID is currently behind the government-wide schedule for completing the assessment, renovation, validation, and implementation phases, USAID may not have the time needed to fix key systems in time to avoid disruptions to its operations. USAID has agreed to develop contingency plans if corrective actions fall further behind schedule. However, given that USAID is unlikely to meet government-wide schedules and is at high risk of not completing renovations in time, we believe USAID needs to focus immediate attention on preparing contingency plans that will ensure the continuity of business operations.

USAID's Year 2000 assessment phase process did not include preparation of realistic contingency plans for core business processes, as suggested by the GAO assessment guide. GAO's exposure draft, "Year 2000 Computing Crisis: Business Continuity and Contingency Planning," dated March 1998, also points out that because many federal agencies will not be able to renovate and fully test all of their mission-critical systems, they may face major disruptions in their operations

when systems fail. As we reported above, USAID (1) has not developed reliable schedules or resource estimates, (2) is already behind the government-wide schedule to implement compliant systems, and (3) has left little time for testing and validation. Year 2000 contingency planning is needed to provide assurance that an USAID's mission-critical functions will continue if one or more systems fail.

In its May 1998 OMB quarterly status report, USAID stated that it has not yet begun developing contingency plans. Instead, USAID plans to develop contingency plans for the NMS and any other mission-critical system if those systems encounter further schedule delays. Although USAID's focus has been on contingency plans for individual systems, GAO's guidelines focus on the need to prepare contingency plans to ensure continuity of business operations. Further, OMB calls for agencies to prepare contingency plans if government-wide target dates will not be met. Unless contingency plans that focus on continuity of operations are developed and tested, USAID may encounter business disruptions. Planning for continuity of operations also requires heavy involvement of program officials, and may need to rely heavily on informal spreadsheet systems, but neither has been a focus of Year 2000 efforts.

To illustrate, USAID needs to ensure that missions are able to continue operations in the event of disruptions of services in the host country. Many countries, and especially developing countries, appear to be poorly prepared to deal with Year 2000 problems. As a result, there is a good likelihood that USAID's missions will encounter support problems. Contingency planning must take into account the impact of external systems, other financial institutions, customers, business partners, and infrastructure providers such as suppliers of power and telecommunications.

To mitigate the risk that system failures will disrupt operations, we believe USAID needs to immediately develop and test contingency plans that focus on ensuring continuity of essential business operations. These plans may require manual processes, back-up power supplies, and the use of informal spreadsheet systems.

**Recommendation 2: We recommend that the responsible official for the Year 2000 compliance program direct USAID Bureaus and Missions to develop and test contingency plans to ensure continuity of operations in the event of disruptions to systems from Year 2000 problems.**

### **Identify Interface and Data Exchange Issues**

Because many computer systems exchange data with other external systems, interfaces and data exchanges must be considered in dealing with Year 2000 problems.

As of May 1998, USAID reported in its quarterly report to OMB that data exchanges have been identified for all mission-critical systems and contacts have been initiated with all partner organizations for these exchanges. This report also states that agreements have not been reached

in all cases regarding the common standards. Some of the agencies that USAID interacts with include Department of State, Department of Treasury, Department of Commerce, and Office of Personnel Management.

Documentation from the Year 2000 project team confirmed that mission-critical system data exchanges have been inventoried and that 36 data exchanges between 19 partners were identified. All of these partners have been contacted; but only one agreement had been reached by mid-June 1998. Responsible USAID officials are continuing to follow-up with data exchange partners to reach agreements, and believe that agreements will be reached. We also believe that USAID has enough time to reach agreements with data exchange partners.

### **Identify Non-Information Technology (Non-IT) Equipment**

Although USAID does not have a complete inventory of Non-IT equipment, it has made substantial progress identifying and correcting vulnerabilities to such equipment.

Examples of Non-IT equipment and machinery include the following:

Office Systems – phones, fax machines, copiers, time recording equipment, mobile phones, and cameras.

Building Systems – backup lighting, generators, fire controls, HVAC, thermostats, elevators and escalators, security systems, door locks, electrical supply, etc.

Transport – vehicles, signaling systems, traffic lights, ticketing machines, and meters.

Communications – telephone exchange, cable systems, telephone switches, satellites, and data switching equipment.

Banking and Commercial – automated teller systems, credit card systems, scanners, and registers.

Testing and Diagnostic Systems

Others – energy metering, environmental monitoring equipment, and VCRs.

In October 1997, the Year 2000 team requested all Mission Directors, USAID representatives, and Executive Officers to identify and assess all Non-IT equipment in order to ensure that mission-critical equipment containing date-sensitive embedded microchips will operate properly on January 1, 2000. The missions were also sent guidance on how to request information from manufacturers of equipment.

As of July 1998, the majority of the missions have responded. Several missions have requested additional information from the manufacturer. Because USAID did not receive responses from all missions and additional information is still being gathered, there is the possibility that not all Non-IT equipment has been identified. However, we believe that adequate time remains to complete this assessment and take appropriate action to correct deficiencies.

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## **Conclusions**

Because USAID relies heavily on information systems to conduct its operations, failure to identify all significant systems, correct Year 2000 problems in time, or develop adequate business continuity plans could lead to disruption of important business operations. USAID has encountered delays in its efforts to correct Year 2000 problems. Even though USAID has hired a contractor to correct system deficiencies, it is unlikely that all Year 2000 deficiencies will be corrected in time. In order to overcome organizational inertia, USAID top management must take aggressive actions to prevent disruption of USAID operations due to Year 2000 problems.

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## **Management Comments and Our Response**

In a September 15, 1998 response to our draft report, the Assistant Administrator for Management (AA/M) concurred with the two recommendations and stated that USAID is taking action to complete Y2K remediation. The response stated that USAID is establishing a disciplined Y2K project team that includes a Capability Maturity Model (CMM) Level 3 contractor under careful government monitoring of performance. Management's comments are reproduced in Appendix II.

Based on the above, a final management decision has been reached on the recommendations. USAID Office of Management Planning and Innovation (M/MPI) should be advised when final action is complete.

## **SCOPE AND METHODOLOGY**

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### **Scope**

Our review of USAID's plans and actions taken to implement the General Accounting Office's suggested practices to resolve the Year 2000 problem was limited to the assessment phase. The scope also includes USAID's missions, interfaces with other government agencies, and program-funded IT support provided to client countries. Our review was conducted at USAID/Washington between March 1998 and July 1998. This audit was conducted in accordance with generally accepted government auditing standards.

During the course of the review, we did raise a question about our independence because the Office of Inspector General (OIG) also has information systems that are vulnerable to Year 2000 problems. The second general standard of the generally accepted government auditing standards, independence, calls for the organization and individuals conducting the audit to be organizationally independent and to maintain an independent attitude and appearance. Because deficiencies in USAID's assessment phase activities could reflect deficiencies in OIG's activities, our organizational independence could be questioned. In order to prevent the appearance of an organizational conflict, we excluded OIG systems from the scope of the audit. Therefore, this report does not address the adequacy of OIG Year 2000 assessment phase activities.

We audited the extent to which USAID has identified and planned for the Year 2000 problem and the impact any deficiencies may have on meeting the Year 2000 deadline. To the extent that Year 2000 deficiencies existed, we identified the factors that caused the deficiencies.

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## Methodology

For this review, we used the following guidance to evaluate USAID's efforts to assess the Year 2000 problem:

- # General Accounting Office, "Year 2000 Computing Crisis: An Assessment Guide" and exposure draft, "Year 2000 Computing Crisis: Business Continuity and Contingency Planning,"
- # Office of Management and Budget memorandum, "Progress Reports on Fixing Year 2000 Difficulties," and
- # Office of the President Executive Order 13073, "Year 2000 Conversion."

We compared USAID's Year 2000 status to the guidance to determine the extent to which USAID has completed Year 2000 assessment phase processes. We documented the extent to which USAID implemented the GAO recommendations and the impact of not implementing those recommendations.

We interviewed USAID Year 2000 program officials, Information Resources Management, Policy and Program Coordination, and Office of Administrative Services personnel to determine USAID's accomplished actions and plans that address the General Accounting Office's suggested practices for the assessment phase to resolve the Year 2000 problem.

We reviewed available documentation describing USAID's efforts to resolve the Year 2000 problem such as USAID's response to OMB quarterly status report, Year 2000 Situation Reports, contractor technical analyses, minutes of decision meetings, contract deliverables, and the status of recommendations from a prior audit of the Year 2000 problem. We also reviewed documentation describing the potential impact of the Year 2000 problem, such as GAO reports, testimonies presented to congressional committees, and Office of Management and Budget memoranda.

The audit methodology was not sufficiently rigorous to detect all problems in USAID's efforts to date to solve the Year 2000 problem. Since we only audited USAID's plan to manage the assessment phase, other serious problems may arise in the renovation; validation; and implementation phases. Therefore, this audit did not ensure that all problems in USAID's efforts to manage the Year 2000 problem were identified and reported.



U.S. AGENCY FOR  
INTERNATIONAL  
DEVELOPMENT

MEMORANDUM

September 15, 1998

TO: IG/A, Everette B. Orr  
FROM: AA/M, Terrence <sup>TJB</sup>Brown  
SUBJECT: Audit of USAID's Assessment of the Year 2000 (Y2K)  
Problem (Draft Audit Report No. A-000-98-XXX-P)

Thank you for the opportunity to comment on this audit report. Given the importance and complexity of the Y2K problem, the continued efforts of the OIG for USAID to help identify management and operational problems to be corrected is a significant contribution to helping the Administrator, the Y2K Program, and the Agency meet their responsibilities and duties in this area.

The findings of fact contained in this audit report were generally correct at the time the audit work was conducted. However, since the working papers for the report were compiled, USAID has made important progress in documenting engineering level plans, budgets, and schedules for completing Y2K remediation. In addition, USAID has made progress in adopting concrete and practical performance measures to track the implementation of those plans, to ensure that roadblocks are identified, and to ensure that corrective action is taken as needed to meet the planned schedules. This progress is a direct result of USAID's efforts to establish a disciplined Y2K project team. This team includes a CMM Level 3 contractor under careful government monitoring of performance. These new conditions indicate that significant progress has already been made to address your second finding.

USAID agrees that more effort is needed to find Y2K vulnerabilities missed in the first inventory effort. USAID also agrees with your conclusion that the least clearly defined Y2K vulnerabilities for USAID's program are in "systems maintained by bureaus and missions and systems provided to host countries with development assistance funds."

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Regarding Recommendation 1, USAID accepts this recommendation. The Administrator intends to issue a delegation of authority to clarify the assignment of responsibility for the Y2K program (including both OE funded IT and also Y2K issues involving the Agency's bilateral assistance program). This delegation will ensure that the responsible official(s) have adequate authority and resources to complete the program. This assignment will be careful to clearly assign responsibility and authority for "systems maintained by bureaus and missions and systems provided to host countries with development assistance funds."

Regarding Recommendation 2, USAID has already initiated a contingency planning exercise to cover its most critical operational systems, focusing initially on AWACS and MACS which are at highest schedule risk. USAID accepts your recommendation to clarify responsibility for Contingency Planning. The Administrator or the Y2K responsible official(s) intends to assign Assistant Administrators (and through them Mission Directors) the responsibility to conduct contingency planning to ensure continuity of operations due to Y2K problems. This will specifically address Y2K contingencies for Bureaus and Missions, as you recommend.

USAID is also preparing a supplemental budget request for Y2K activities to accelerate remediation efforts on our mission critical systems that would otherwise miss OMB targets, to expand contingency planning efforts, and to resolve other resource issues to sustain the operations of the Agency in host nations facing Y2K infrastructure disruption.

Thank you again for your office's continued contributions to our Y2K program. Please continue your audits in this area.

## ASSESSMENT PHASE KEY PROCESSES

Key Processes	
1.	Define Year 2000 compliance.
2.	Focus on core business areas and processes and develop a Year 2000 assessment document.
3.	Assess the severity of an impact of Year 2000-induced failures.
4.	Conduct enterprise-wide inventory of information systems for each business area.
5.	Develop a comprehensive automated system portfolio.
6.	Analyze system portfolio.
7.	Prioritize systems and components to be converted or replaced.
8.	Establish Year 2000 project teams for business areas and major systems.
9.	Develop Year 2000 program plan.
10.	Identify, prioritize, and mobilize needed resources.
11.	Develop validation strategies, testing plans, and scripts.
12.	Define requirements for Year 2000 test facility.
13.	Identify and acquire Year 2000 tools.
14.	Address implementation schedule issues.
15.	Address interface and data exchange issues.
16.	Initiate the development of contingency plans for mission-critical systems.
17.	Identify Year 2000 vulnerable systems and processes operating outside the information resource management area.

## GAO ASSESSMENT GUIDE PHASES

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### GAO Assessment Guide Phases

GAO "Year 2000 Computing Crisis: An Assessment Guide," September 1997, identified the following five phases that represent major Year 2000 program activities.

- ▶ **Awareness.** Define the Year 2000 problem and gain executive level support and sponsorship. Establish Year 2000 program team and develop an overall strategy. Ensure that everyone in the organization is fully aware of the issue.
- ▶ **Assessment.** Assess the Year 2000 impact on the enterprise. Identify core business areas and processes, inventory and analyze systems supporting the core business areas, and prioritize their conversion or replacement. Develop contingency plans to handle data exchange issues, lack of data, and bad data. Identify and secure the necessary resources.
- ▶ **Renovation.** Convert, replace, or eliminate selected platforms, applications, databases, and utilities. Modify interfaces.
- ▶ **Validation.** Test, verify, and validate converted or replaced platforms, applications, databases, and utilities. Test the performance, functionality, and integration of converted or replaced platforms, applications, databases, utilities, and interfaces in an operational environment.
- ▶ **Implementation.** Implement converted or replaced platforms, applications, databases, utilities, and interfaces. Implement data exchange contingency plans, if necessary.